METHOD AND APPARATUS FOR CONTROLLING A SPOT FUNCTION FOR DIGITAL HALFTONING

ABSTRACT

A digital halftoning technique for controlling a spot function to address gear noise, printer stress, and general print quality is disclosed. A method for generating a spot for use in halftoning according to the present invention includes defining a spot function that combines two functions selected to provide a predetermined spot shape for use in a halftone cell and scaling the spot function using a scaling function that varies according to a value of a first and second spot function ordinate. Asymmetric modulation of spot functions is used to control the touching of adjacent spots, and to change the shape of the spots with the gray region. The resulting non-separable shape-changing spot function can reduce printer stress and improve print quality.